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**To:** Hilton, Barry; Leary, Pat; McChesney, Frances  
**Date:** 7/14/2006 2:02:36 PM  
**Subject:** Fwd: Mountain House

Mountain House comments.  
I believe the same documents were submitted regarding Tracy.

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July 14, 2006

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Mr. Kenneth D. Landau  
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Central Valley Region  
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Re: Comments to Proposed Waste Discharge Requirements for  
Mountain House Community Services District

Dear Mr. Landau:

The following are South Delta Water Agency's comments to the proposed waste discharge requirements ("Proposed Order," or "Order") for the Mountain House Community Services District's proposed increase in discharges from their waste water treatment facility.

The salinity problem in the South Delta has been present since the CVP began operations nearly fifty years ago. Of course, all beneficial uses of the River and the Delta should be allowed. This includes consumptive uses, which naturally concentrate the

various constituents in the water, and drainage back to the River as permitted by law. However, a distinction must be made between those who consume water and concentrate such things as salts and those who add salts. Dischargers such as the Mountain House Community Services District add significant additional salts and must address these additions as conditions to their ability to discharge. Although the State and Federal projects initially caused the problem, that is not a reason to allow others to exacerbate the problem. It is reasonable to allow any discharger time to address a discharge problem, but the issue cannot be deferred indefinitely.

1. The Order lists Section 122.44(d) of the Federal Regulations as requiring limitations on pollutants that will contribute to an exceedance of numeric water quality standards. The Regional Board should better explain its reasoning for allowing salinity (EC) discharges well in excess of the standard into areas that will likely have regular exceedances of that standard.

2. On pages 5, the list of impairments for the Delta omits EC and TDS.

3. In referring to the "Anti-Backsliding" requirements of the CWA, the Order states on page 7 that its effluent limitations are at least as stringent as the previous limitations. This is difficult to understand. Attachment F includes a description of existing requirements. This description lists no previous limit on EC discharges (which doesn't seem correct). This does not appear to fully explain compliance with the Anti-Backsliding, or non-degradation policies of State and Federal law.

4. Section V. beginning on page 12 lists receiving water limitations, but omits salinity/EC. The Southern Delta has three compliance locations for EC as set forth in the 1995 Water Quality Control Plan and implemented in D-1641. If the Regional Board chooses to deal with the salinity issue later in the Order, it should clarify in Section V. why EC is not addressed in that section.

5. Pages 19 and 21-23 identify a reporting condition which requires the discharger to investigate the "appropriate EC levels to protect the beneficial uses of agricultural supply in areas irrigated with Old River waters in the vicinity of the discharge." The report seeks information on "sodium adsorption ratios" "effects of rainfall and flooding on leaching"

and how “climate, soil chemistry” and “background water quality” may affect agricultural beneficial uses. Such an investigation and its results are contrary to not only existing water quality objectives, but also to the statutory process by which water quality objectives are set. Embarking on a procedure by which the Regional Board may allow discharges in excess of established and adjudicated standards is contrary to the legal requirements of both the Porter-Cologne Act and the Clean Water Act.

The water quality necessary to protect agricultural beneficial uses in the South Delta was determined through an open and public process which encompassed thousands of man-hours, extensive technical review, and evidentiary hearing before the State Water Resources Control Board. The information sought has already been produced and is part of the SWRCB's records. Attached hereto are SDWA's exhibits, testimony and transcripts for a CDO hearing conducted earlier this year before the SWRCB. As the materials indicate, the conditions in the South Delta are such that the diversity of soils prevent adequate leaching and result in the build-up of salts in the soils. The only confusion on this issue is the Regional Board's apparent desire to ignore the data.

The Regional Board can not attempt to escape the legal process involved and requirements of issuing waste discharge permits by having a permittee produce its own analysis of what water quality protects any particular beneficial use. The standards have been set; neither the Regional Board or a discharger can unilaterally change them. If the Regional Board chooses to delay or excuse compliance with water quality standards it may do so only by complying with the law. It can't do so by conducting (or ordering) its own non-public study as to what is necessary to protect beneficial uses. The subject provision must be stricken or it will be overturned in a judicial review of the final Order.

6. The Order should explain why an increase in discharges should be allowed before any actions are implemented which actually address the discharge of salinity in excess of current standards.

7. Additional monitoring locations are required. Without any tidal barriers, the Mountain House effluent has a net flow out Old River and Grant Line Canal. Even with the

incoming tides, the effluent does not travel a significant distance up Old River. On the outgoing tides, the effluent travels generally downstream to the CVP export pumps.

With temporary barriers, there is still a net flow downstream, though radically reduced to the point where the flow is minor. This results in a large (virtually) stagnant zone in Old River upstream of the Tracy Old River barrier to approximately the Tracy Boulevard Bridge. In this stagnant zone, DO decreases, salinity increases, and all other constituents of concern concentrate. That portion of the effluent that enters Grant Line Road joins a net flow out that channel. Again, virtually none of the effluent travels very far upstream on Old River.

With the permanent barriers (anticipated under the South Delta Improvement Plan, or "SDIP") the flows should be significantly different. The permanent barriers are intended to either create a sufficient net flow over (downstream) the Grant Line barrier, or, may create the net flow over the Tracy Old River barrier. Either way, the program seeks to establish a sufficient net flow to maintain a flushing of the area. SDWA comments to the project address the apparent shortcomings of the plan, which include the periodic lack of flushing flows which may result in stagnant zones on low tide cycles. During those times, water will flow into the South Delta, but there will be little if any outflow flushing the salinity.

In light of this, the monitoring stations should be situated so that they can monitor the channel conditions regardless of whether barriers are in and operating or not. Additional stations on Old River, Doughty Cut/Salmon Slough area and Grant Line Canal would seem warranted.

In order to fully monitor the salinity being discharged and its effects on local beneficial uses, it would seem proper to have numerous, continuous monitoring. Without such monitoring, the effluent could regularly be far in excess of the standard or the permit term. In addition, the receiving waters might be in excess of the standard and further discharges by the City could exacerbate (or cause) violations, thus defeating the purpose of the permit and the standard.

8. The Order should require chronic toxicity testing no less often or less stringent than under the Ag Waiver program of the Regional Board. The local Coalition is required to test at numerous sites after two winter storm events, and six times during the "irrigation" season. All

these test include toxicity testing of three species. Given the continuous discharge of the City effluent, the Order appears inadequate.

9. The Order references the SWRCB Anti-degradation policy set forth in Resolution 68-16. This policy requires the maintenance of high quality waters until it is demonstrated that (i) a change (degradation) is consistent with the maximum benefit to the people of the State, (ii) will not unreasonably affect beneficial uses, and (iii) will not result in quality less than that described in the Regional Board's policies. The Order states that the degradation allowed under the proposed discharge requirements meets these criteria, but does not explain how.

It states the degradation is consistent with the maximum benefit to the people of the state. There is no analysis on which such a conclusion is based. Benefit to the people is not a function of comparing how many people are harmed to how many are not. Mountain House' s growth may be a benefit, but the cost associated with that growth must include the protection of the waters of the state. The damage to the local agriculture from increased discharges of increased salinity also has many adverse impacts to the people of the state. Again, the conclusion is not supported.

The Order also states that discharge is a necessary function of growth, but makes no effort to connect this to the Resolution 68-16 criteria. Similarly, the Order notes that the eventual permit would result in "a high level of treatment of sewage waste." Again, this may be the case, but it does not address the applicable criteria. The authors appear to be mis-characterizing an economic analysis which they assumedly think shows it is better to allow degradation than to pay for treatment. If such a conclusion is possible, it would be a necessary component of the City's EIR for its general plan or other planning and environmental documents supporting its growth. Merely stating the conclusions in the brief analysis of the Order is inappropriate and cannot substitute for a necessary follow-on EIR if the previous documents failed to analyze the adverse impacts from discharges.

The Order fails to examine the other criteria in the anti-degradation policy; not unreasonably affecting beneficial uses and not being in conflict with existing Regional Board policies. Discharges of 1875 EC when the standard is 700 EC is necessarily an unreasonable

affect on agricultural beneficial uses. Further, since the Regional Board policies currently specify 450 TDS and 700 EC as being necessary to protect beneficial uses, we see no way the Order can conclude it complies with Resolution 68-16.

10. Page F-11 notes that the Order establishes an interim effluent limit of 1000 EC. However, on page 12 the Order lists 1875 EC as the interim effluent limit. Which is the actual limit?

11. The Order notes that the interim effluent limit of 1000 EC is “essentially the same as the short term secondary maximum contaminant level . . . for protection of municipal and domestic supply” (1000 EC). There is no apparent reason why a municipal and domestic limit is relevant to discharges in excess of existing standards. No reason is given for allowing a greater EC than the municipal and domestic limits.

Further, the draft Order for the City of Tracy’s NPDES permit lists 2200 EC as being the secondary maximum containment level for protection of municipal and domestic supply. What is the correct MCL and why are the two communities treated differently?

12. Table F-3 includes three footnotes, one of which is associated with EC, TDS, and Chloride. The footnote (2) appears to set forth an argument as to why existing water quality objectives for agricultural beneficial uses are not needed. It speculates that the agricultural beneficial users may need to permanently change their crops so that the City can discharge at over three times the standard. It also speculates that, contrary to the evidence, testimony and conclusions of the SWRCB, South Delta agricultural interests can simply change their irrigation methods and live with the higher concentrations of salt. Finally, it suggests that maintaining maximum yields is not necessary because Mountain House wants to grow. It is strange to have such language in the analysis of impacts to water quality. It indicates both a bias against agriculture and a lack of understanding of the issues facing the South Delta and water quality in general.

Further, the Order fails to calculate the mass loading of salts resulting from the increase and any information on the increase. It is a simple calculation to determine how much salt is in the increased discharge.

13. The Order notes that historic data indicates the effluent ranges from 920-1600 EC but gives none of the actual data. It appears that the discharge is almost always above the September - March standard and always above the April - August standard.

14. On Page F-47 the Order stated that the nearest monitoring station is "approximately four miles west (downstream) of the discharge" point. The statement is incorrect. The discharge is four miles west of the monitoring station at Tracy Blvd. Bridge.

15. The Order also states that "D-1641 water quality objectives are not applicable throughout Delta waters, but are applicable only at monitoring (sic) locations prescribed in D-1641." This is incorrect. The Objectives are monitored at compliance locations, but that does not mean exceedances are allowed at all other locations in the South Delta. One wonders why the Regional Board would suggest a position that would allow water quality to degrade between compliance locations.

16. The Order purports to require the discharges to meet compliance schedules and use BPTC's and "result in compliance with water quality objectives" (page F-11). To the contrary, the Order requires the discharger investigate what salinity is needed for local agriculture, and then anticipates meeting this to-be-developed criteria, not meet the water quality objectives.

Strangely, the Order makes no investigative or analysis of how the discharge will effect the existing objectives. Neither does it require the discharges to conduct such investigation or analysis. The previous study (not submitted to SDWA) referenced on page F-21 apparently suffers from limited data and false assumptions (e.g., all four temporary barriers in place through July). The conclusion though is that the discharge area is stagnant. Rather than this being a reason to address high saline discharges, the Order simply concludes there is "no basis for a dilution credit."

17. The Order incorrectly summarizes the effects of salinity on crops. Under laboratory conditions, the 450 TDS and 700 EC limits do apply to salt sensitive crops with adequate leaching. However, the various soil types in the South Delta, combined with varying water tables results in these limits being necessary to protect most other

crops, including but not limited to alfalfa, grapes, and walnuts. The Order tries to suggest that only a few crops need this level of protection whereas the evidence confirms most crops need the protection.

18. Attachment F, beginning on page F-15 and continuing describes the temporary and proposed barrier programs in the South Delta. It also references modeling and other investigations performed to analyze the effects of the effluent discharge to the waters of Old River and other South Delta channels. The descriptions contained some inaccuracies and fail to include the most recent and reliable information.

The temporary barrier program is not constituted to, nor does it address the water quality standards in the interior South Delta. The Bureau does operate New Melones to control salinities at Vernalis, but the downstream temporary barriers are to control water stage or level, not salinity. Initially, it was hoped that the temporary barriers would decrease salinity concentrations somewhat, but experience has shown the opposite. The barriers have moved the null zones created by the export pumps to different locations, and generally increase the scope of those null zones. Currently, in addition to the null zones associated with dead end channels, the temporary barriers create (nearly) null zones immediately upstream of the Tracy Old River and Middle River barriers. Prior to the high flow years of 2006 and 2005, these null zones exacerbated salt concentrations and created areas of minimal DO, resulting in local fish kills (see Dr. Fred Lee, at [\\_www.gfredlee.com\\_](http://www.gfredlee.com) (<http://www.gfredlee.com>) ).

The three agricultural barriers are sometimes installed as early as April, but operations of those barriers are always conditioned on fishery agency concerns regarding endangered and threatened species, especially Delta smelt. Typically the Tracy Old River and Middle River barriers are installed in April but the flap gates not operated until after the HOR barrier is removed (generally post VAMP flows). The Grant Line Canal barrier is typically only partially installed and then operated thereafter, also post VAMP. This hybrid configuration provides significantly different flows than with "normal" barrier operations. Pursuant to a yearly agreement with SDWA, DWR generally always allows water to flow through the fall HOR barrier to protect downstream water levels. The above operations are not referenced in



Attachment F.

The permanent barrier designs are for all practical purposes set, and not being dependent on further temporary barrier operations and analysis. The draft EIS/R for the SDIP has been released for public review, and DWR is currently preparing response to comments and finalizing the document.

Before the proposed permitting can go forward, the permittee and the Regional Board need to consider actions that might partially mitigate the adverse effects which will result from the increase in discharge and allowed increased in concentration of the discharge. The parties should consider such things as some sort of dilution program or other actions to decrease salinity concentrations. One such action would supporting the addition of low lift pumps to the permanent barriers which would augment the incoming tidal flows and provide mixing and dilution. Other actions may also be possible and must be investigated.

Please call me if you have any questions or comments.

Very truly yours,

JOHN HERRICK

JH/dd  
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